



# Diabetes Self-Management Education and Support

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Module 6  
Being Active  
Revised July 2024

**VA**



U.S. Department of Veterans Affairs  
Veterans Health Administration



U.S. Department of Defense

## In This Module You Will:

- List the benefits of being active.
- Recognize how to exercise safely.
- Explain how to adjust food intake to balance the impact of physical activity.
- Explain why medications and insulin are adjusted for physical activity.
- Create and share a personal activity plan.



## Being Active

Being active helps keep your blood glucose closer to your target range. This includes all the ways you move with a focus on spending less time sitting.

Being active is a key part of staying healthy. An active lifestyle can:

- Improve the body's ability to use insulin and glucose
- Get the heart rate up
- Burn calories
- Strengthen muscles and bones
- Lower blood glucose
- Delay or prevent long-term complications of diabetes
- Lose body fat
- Boost aerobic endurance
- Enhance mood
- Feel less stress or anxious
- Improve blood pressure and cholesterol
- Reduce chances of dying early



If you are already active—great job, keep it up! If you are inactive or feel out of shape, you have the most to gain by moving a little more each day. Any amount of activity is better than none. By starting with small steps and adding more movement each day, you will begin to feel better and stronger. In time, you will be ready to do more.

## Benefits of Being Active



# PHYSICAL

Better Health - Improved quality of life - Improved fitness - Better posture  
Better Balance - Stronger heart - Fight off illnesses better  
Weight control - Stronger muscles - Stronger bones



# EMOTIONAL

Increased feelings of happiness - positive mood and affect  
Increased feelings of self worth - Better self esteem - Better self confidence  
Increased feelings of success - Lower levels of sadness



# MENTAL

Reduced depression - Reduced anxiety - Reduced stress  
Prevented stress - Better sleep - Increased cognitive functioning  
Increased mental alertness - Feeling more energetic and more relaxed



# SOCIAL

Social integration - Meet new people - Build social skills  
Increased support network - Strengthen relationships  
Enjoy others' company - Increase family time - Build new friendships

## Ways to Be More Active

Any amount of movement is better than none. Incorporating activity into your daily routine is a great first step. Here are some examples to help you get started:

- Walk to the mailbox instead of driving
- Use the stairs instead of the elevator
- Use a shopping cart instead of placing a pick-up order
- Walk the perimeter of the store before you begin shopping
- Stand up, walk around, march in place during TV commercial breaks
- Walk a pet
- Work in the garden
- Chair exercises or chair yoga

Physical activity can improve endurance, flexibility, and strength.

**Endurance:** walking/hiking, biking, and swimming are aerobic exercises that improve endurance.

**Flexibility:** dance, Tai Chi, yoga, and Pilates improve balance.

**Strength:** body weight training and use of resistant bands strengthen muscles and bones.



## Physical Activity Recommendations

Physical activity is the most prescribed treatment. Most will not need medical clearance before starting physical activity but you can check with your health care team or provider if unsure. If you have high blood pressure or eye problems, some activities may not be safe but could be modified for you. Some individuals with diabetes may be asked to monitor glucose more frequently before, during or after activity. Check the pre-activity guidelines found on page 7. Here are some general guidelines:

- Work your way up to 150 to 300 minutes of moderate to vigorous aerobic physical activity.
- Avoid going more than 2 consecutive days without physical activity.
- Aim for 2-3 sessions per week of strength training and 2-3 sessions per week of flexibility training.
- Avoid sitting for long periods of time. Interrupt sitting every 30 minutes.
- Children and adolescents should aim for 60 minutes of physical activity each day.

## General Safety Tips

- Always carry identification.
- Carry a cell phone in case of emergency.
- Include friends and family in your activities.
- Being active with a "buddy" is safer than being alone.
- Use the right safety equipment (such as a bicycle helmet).
- Wear proper footwear.
- Wear closed-toe shoes that fit comfortably.
- Wear sunscreen.
- Bring a whistle.
- Dress for the weather.
- Avoid being active for long periods of time in very hot or very cold weather.
- Walk in the evening if its too hot during the day.
- Skip planned activity if you're sick or not feeling well.
- Drink plenty of water before and during an activity.

## Diabetes Specific Safety Tips

Here are a few additional safety considerations:

- Bring your glucose monitoring supplies (meter, lancet, test strips).
- Carry a fast acting carbohydrate like glucose tablets in case of a low blood glucose. Refer to **Module 1: Diabetes in a Nutshell** to review the list of "fast carbs."
- Wear a medical ID bracelet or dog tag indicating you have diabetes.
- Discuss with your health care team if medication adjustments are needed for your selected activity.
- Stay hydrated. Drink plenty of water.



## Modifying an Activity

Retinopathy, neuropathy, or cardiac issues may cause the need to modify a physical activity plan. Discuss with your provider if you have these or other situations where medical approval is needed. **Module 7-Reducing Risks** has more information about these diabetes complications.

### Retinopathy (damage to blood vessels in the retina)

- Avoid any rigorous exercise that puts pressure on your head and eyes.
- Avoid bending exercises where the head is below the waist.

### Neuropathy (damage to the nerves, commonly hands and feet)

- Be sure to check feet daily especially after exercise.
- Monitor areas of less sensation (feet).
- Choose exercises that are low impact.
- Wear proper footwear

### Cardiac Issues (damage to the heart)

- Avoid strenuous exercise and heavy lifting.

Have you seen a physical therapist?

What advice was provided by the physical therapist?

### NOTES:

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## Pre-Activity Guidelines

If You Don't Use Insulin	If You Use Insulin	Type 1 With Urine Ketones
<ul style="list-style-type: none"> <li>• Being active may cause glucose to drop faster than usual.</li> <li>• Always check glucose with a meter or a continuous glucose monitor to help reduce the risk of lows.</li> <li>• Eat a snack with 15-30 grams of carbohydrate with protein if blood glucose is under 90 mg/dL.</li> <li>• If taking an SGLT-2 Inhibitor, ask healthcare team for guidance.</li> </ul> 	<ul style="list-style-type: none"> <li>• Check glucose before, during, and after physical activity until you know what your glucose will do.</li> <li>• If blood glucose is under 90 mg/dL, eat a snack with 15-30 grams of carbohydrate, 1-2 hours prior.</li> <li>• Discuss with your provider how to maximize technology (continuous glucose monitors thresholds, Apps) to ensure safety.</li> <li>• During exercise, pay attention to how you feel. Check your glucose. Carry fast carbs. If at any time you do not feel well, stop exercising.</li> <li>• Don't exercise when glucose is over 250 or if you have ketones in urine or blood. Talk to provider or health care team about what is a safe glucose for you.</li> <li>• Don't exercise right before bed, because this could cause hypoglycemia (low blood glucose) during the night.</li> <li>• The metabolic impact of exercise lasts for many hours. Some insulin using individuals experience low glucose during exercise, others the first 2 hours after an event and others for up to <b>18 hours after the event.</b></li> </ul>	<ul style="list-style-type: none"> <li>• Delay physical activities if moderate or large ketones and call your provider. If moderate or large ketones, vomiting, or unable to keep fluids down, <b>CALL 911 or go to the Emergency Room.</b></li> <li>• Give a correction dose of a fast-acting insulin (e.g., Novolog, Humalog) via syringe or insulin pen as advised during 911 call.</li> <li>• If able, drink water every 30 minutes.</li> <li>• Retest glucose and ketones every 2 hours until ketones are negative, and glucose is within target.</li> </ul>



## Exercise Snacks

If you are on insulin, an SGLT-2, or a sulfonylurea it can be important to eat a snack before you exercise.

Generally, 15 to 30 grams of a carbohydrate works best, however, it depends on the intensity and duration of the activity. Talk to your dietitian for the best snack choices for you.

If you have low glucose during and after exercise, you need to eat an additional 15 gram carbohydrate snack and possibly make medication changes.



### Examples:

One snack should be 50-75 calories and 15 to 30 grams of carbohydrate:

- 1 piece of fresh fruit
- 1 small box of raisins
- ½ peanut butter sandwich
- 1 rice cake with 1 tablespoon peanut butter
- 3 fig Newton squares
- ¼ cup nut and raisin (“Trail”) mix
- 1/2 cup chocolate milk

## Creating a Personal Activity Plan

1. Choose your favorite activities. Think about the things that YOU like to do. If you enjoy it, you are more likely to stick with it. What more are you willing to do?
2. Begin with 5 or 10 minutes of the activity and work your way up to 30 minutes. Set an exercise goal of 30 minutes, 5 days a week (or more if you can!)
3. Start slow. Your activity should raise your heart rate, but not cause you to be out of breath.
4. Check your glucose. Follow the **Pre-activity Guidelines on page 7**.
5. Carry “fast carbs.” Glucose tablets or glucose gel are examples to keep in a pocket and have readily available during and after physical activity.
6. Keep track of your activity. This allows you to see if you are meeting your goal. Also, it may help you feel good about yourself and the progress you are making.
7. Find a friend to join you. Having someone to exercise with may help motivate and keep you going.
8. Take a class or join a league. Consider checking into a military gym, health club, or local recreation department. They may offer fun classes.



What will be your first step?

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What more are you willing to do?

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What would be a specific SMART goal you might set?

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## Summary

This session reviewed the benefits of being active and how to exercise safely. Module 6 also explained how to adjust food intake, why medications and insulin are adjusted for physical activity and how to create a personal activity plan.

## Key Points

- Being active is a key part of diabetes self-management.
- Physical activity can provide physical, emotional, mental, and social benefits.
- Physical activity will improve insulin sensitivity and metabolism which may result in reduced medications.
- It is recommended to exercise 150 minutes each week and to include strength training 2-3 times each week.
- When exercising, it is important to follow general and diabetes-specific safety tips.
- If you have retinopathy, neuropathy, heart disease or other situations, you may need to modify the type of exercise you do.
- Creating a personal activity plan and setting goals will help you stay on track.

## Before Next Class

- Review **Module 7:Reducing Risks**
- Write down your questions
- Work on your healthcare goal or changing a habit/behavior



## Notes:

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